REMARKS

In response to the Office Action dated April 15, 2011, Applicant respectfully requests reconsideration. Claims 1-12, 14-32, 34-54, 56-71, 73-88, 90-108, and 110-116 were previously pending in this application. By this amendment, Applicant is canceling no claims and adding no claims. Claims 1, 21, 41, 63, 80 and 97 are amended. As a result, claims 1-12, 14-32, 34-54, 56-71, 73-88, 90-108, and 110-116 remain pending for examination with claims 1, 21, 41, 63, 80 and 97 being independent. No new matter has been added.

Rejections Under 35 U.S.C. §101

The Office Action rejects claims 21-32, 34-40, 80-88 and 90-96 under 35 U.S.C. §101 because the claimed invention is purportedly directed to non-statutory subject matter. Applicant has amended claims 21-32, 34-40, 80-88 and 90-96 for clarity and respectfully asserts that these amendments render moot the rejection of claims 21-32, 34-40, 80-88 and 90-96 under 35 U.S.C. § 101. Accordingly, reconsideration and withdrawal of these rejections is respectfully requested.

Rejections Under 35 U.S.C. §103

The Office Action rejects claims 1-12, 14-32, 34-54, 56-67, 69-71, 73-84, 86-88, 90-104, 106-109, and 110-116 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,173,374 (Heil) in view of U.S. Patent Publication No. 2005/0005066 (Nakayama). These rejections are respectfully traversed.

I.   _Independent Claim 1_

The rejection of independent claim 1 should be withdrawn because Heil and Nakayama, alone or in combination, fail to teach or suggest every limitation of claim 1. Specifically, the cited references do not disclose "identif[ying] the unit of data via a content address that is based, at least in part, upon at least a portion of the content of the unit of data."

Moreover, without acceding to the propriety of the rejections, independent claim 1 is herein amended to clarify the claimed subject matter. Each independent claim of the present application, as amended, recites, "each of the plurality of storage clusters comprises *a plurality of nodes that*

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share a software utility." Support for this amendment may be found throughout the original disclosure, for example, at page 8, lines 8-24. The cited references fail to disclose this additional limitation.

         A.   *The cited references, alone or in combination, fail to disclose "identif[ying] the unit of data via a content address that is based, at least in part, upon at least a portion of the content of the unit of data"*

Neither Heil, nor Nakayama, alone or in combination, teach or suggest "identif[ying] the unit of data via a content address that is based, at least in part, upon at least a portion of the content of the unit of data," as recited by claim 1. The Office Action (page 6) concedes that Heil fails to disclose this limitation, but asserts that Nakayama teaches it, citing ¶85, ¶¶22-26, ¶¶30-33 and ¶¶45-47. Applicant respectfully disagrees.

The cited portions of Nakayama are directed to a "guarantee code" that is "***based on*** an attribute (for example, *logical address* and error-correcting redundant code) of the data which is requested to be written" (¶23). Nakayama is thus basing the guarantee code on the address of the data being written. Nakayama does not teach the guarantee code being used as a "content address." Nor would it be possible for the guarantee code to be used as a "content address" of the data because the address must already exist in order to generate the guarantee code.   The guarantee code is merely a means to ensure that data is copied accurately (¶22) and not a "content address." The only address discussed by Nakayama is the "logical address," which is not "based, at least in part, upon at least a portion of the content of the unit of data." Therefore, Heil and Nakayama, alone or in combination, fail to disclose at least this limitation of claim 1.

         B.   *The cited references, alone or in combination, fail to disclose "each of the plurality of storage clusters comprises a plurality of nodes that share a software utility"*

Neither Heil nor Nakayama, alone or in combination, teach or suggest "each of the plurality of storage clusters comprises a plurality of nodes that share a software utility," as recited by amended claim 1. The Office Action (page 6) asserts that the storage cluster of Heil maps to the "plurality of storage clusters" of claim 1 and that each individual remote disk of Heil corresponds to

"each of the plurality of storage clusters." However, each remote disk is associated with a single node (see, e.g., Heil FIG. 1). Therefore, Heil does not disclose "each of the plurality of storage clusters comprises *a plurality of nodes that share a software utility*." Nakayama cannot cure this deficiency because the reference discloses a storage system capable of remote copying between different storage systems (¶2). Each of the storage systems is associated with a single node (see FIG. 1). Thus, Nakayama does not disclose "each of the plurality of storage clusters comprises *a plurality of nodes that share a software utility*." Therefore, Heil and Nakayama, alone or in combination, fail to disclose at least this limitation of claim 1.

For at least the foregoing reasons, Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 1. Accordingly, withdrawal of the rejection of independent claim 1 is respectfully requested.

Claims 2-12 and 14-20 depend from claim 1 and are allowable for at least the same reasons.

Independent Claim 21

The rejection of independent claim 21 should be withdrawn because Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 21. Specifically, the limitations "each of the plurality of storage clusters comprises one or more nodes that share a software utility" and "identifies the unit of data via a content address that is based, at least in part, upon at least a portion of the content of the unit of data" are not disclosed by the cited references for reasons that should be clear from the above discussion of the references in connection with claim 1.

For at least the foregoing reasons, Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 1. Accordingly, withdrawal of the rejection of independent claim 21 is respectfully requested.

Claims 22-32 and 34-40 depend from claim 21 and are allowable for at least the same reasons.

Independent Claim 41

The rejection of independent claim 41 should be withdrawn because Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 41. Specifically, the limitations

"each of the plurality of storage clusters comprises one or more nodes that share a software utility" and "the unit of data is accessible by a content address that is based, at least in part, upon at least a portion of the content of the unit of data" are not disclosed by the cited references for reasons that should be clear from the above discussion of the references in connection with of claim 1.

For at least the foregoing reasons, Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 41. Accordingly, withdrawal of the rejection of independent claim 41 is respectfully requested.

Claims 42-62 depend from claim 41 and are allowable for at least the same reasons.

Independent Claim 63

The rejection of independent claim 63 should be withdrawn because Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 63. Specifically, the limitations "each of the plurality of storage clusters comprises one or more nodes that share a software utility" and "a content address of the unit of data that is based, at least in part, upon at least a portion of the content of the unit of data" are not disclosed by the cited references for reasons that should be clear from the above discussion of the references in connection with of claim 1.

For at least the foregoing reasons, Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 63. Accordingly, withdrawal of the rejection of independent claim 63 is respectfully requested.

Claims 64-71 and 73-79 depend from claim 63 and are allowable for at least the same reasons.

Independent Claim 80

The rejection of independent claim 80 should be withdrawn because Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 80. Specifically, the limitations "each of the plurality of storage clusters comprises one or more nodes that share a software utility" and "the unit of data is accessible by a content address that is based, at least in part, upon at least a portion of the content of the unit of data" are not disclosed by the cited references for reasons that should be clear from the above discussion of the references in connection with of claim 1.

For at least the foregoing reasons, Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 80. Accordingly, withdrawal of the rejection of independent claim 80 is respectfully requested.

Claims 81-88 and 90-96 depend from claim 80 and are allowable for at least the same reasons.

Independent Claim 97

The rejection of independent claim 97 should be withdrawn because Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 97. Specifically, the limitations "each of the plurality of storage clusters comprises one or more nodes that share a software utility" and "the unit of data is accessible by a content address that is based, at least in part, upon at least a portion of the content of the unit of data" are not disclosed by the cited references for reasons that should be clear from the above discussion of the references in connection with of claim 1.

For at least the foregoing reasons, Heil and Nakayama, alone or in combination, fail to disclose every limitation of claim 97. Accordingly, withdrawal of the rejection of independent claim 97 is respectfully requested.

Claims 98-108 and 110-116 depend from claim 97 and are allowable for at least the same reasons.

General Comments on Dependent Claims

Each of the dependent claims depends from a base claim that is believed to be in condition for allowance, and Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. Applicants do not, however, necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. E0295.70199US00 from which the undersigned is authorized to draw.

Dated: July 15, 2011   Respectfully submitted,

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